IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of	Atty. Docket: 2004P00687WOUS
GHEORGHE SORIN STAN	Confirmation No.: 9390
Serial No.: 10/599,462	Examiner: J. L. ORTIZ CRIADO
Filed: SEPTEMBER 29, 2006	Group Art Unit: 2627

Title: METHOD AND DEVICE FOR WRITING MULTIPLE-LAYER OPTICAL DISCS

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P.O. Box 1450
Alexandria, VA 22313-1450

APPEAL BRIEF

Sir:

Appellant herewith respectfully presents its Brief on Appeal as follows:

REAL PARTY IN INTEREST

The real party in interest is Koninklijke Philips Electronics N.V., a corporation of The Netherlands having an office and a place of business at Groenewoudseweg 1, Eindhoven, Netherlands 5621 BA.

RELATED APPEALS AND INTERFERENCES

To the best of Appellant's knowledge and belief, there are no related appeals or interferences.

STATUS OF CLAIMS

Claims 1-3 and 5-21 are pending in this application. Claim 4 is canceled. All pending claims are rejected in the Final Office Action that issued February 16, 2011.

An Amendment After Final Office Action was filed on April 12, 2011 in response to the Final Office Action. The rejection was upheld, in the Advisory Action mailed on May 5, 2011. Claims 1-3 and 5-21 are the subject of this appeal.

STATUS OF AMENDMENTS

An Amendment After Final Action was submitted on April 12, 2011 in response to a Final Office Action mailed on February 16, 2011. The Amendment After Final Action did not include any amendments. In an Advisory Action mailed on May 5, 2011, it is indicated that the after Amendment After Final Action was considered but that the Amendment After Final action does not place the application in condition for allowance. This Appeal Brief is in response to the Final Office Action mailed on April 12, 2011, that finally rejected all the pending claims, which remain finally rejected in the Advisory Action mailed on May 5, 2011.

SUMMARY OF CLAIMED SUBJECT MATTER

The present system, for example as recited in claim 1, relates to a method of preventing damage when writing information in a storage layer of a multi-layer optical storage medium (e.g., such a system is illustratively shown in the present application, FIG. 1). In accordance with embodiments of the present system, the present method is performed by monitoring a plurality of distinct input signals (e.g., see present application, page 5, lines 19-26) while focusing a write light beam in a focal spot at a target storage layer (e.g., see present application, page 3, lines 16-21), an error on two or more of the plurality of distinct input signals indicating an axial focus spot displacement (e.g., see present application, page 5, line 19 to page 6, line 8 and page 8, lines 30-32); and inhibiting the writing process in case of the axial focus spot displacement (e.g., see present application, page 6, lines 9-19).

The present system, for example as recited in claim 2, relates to a medium access device for preventing damage when writing information in a storage layer of a multi-layer optical storage medium (e.g., such a system is illustratively shown in the present application, FIG. 1), including a light beam generator for generating a write light beam (e.g., see present application, page 1, lines 20-29); a write inhibit circuit for monitoring a plurality of distinct input signals (e.g., see present application, page 5, lines 19-26) while focusing the write light beam in a focal spot at a target storage layer (e.g., see present application, page 3, lines 16-21), an error on two or more of the plurality of distinct input signals

indicates an axial focus spot displacement (e.g., see present application, page 8, lines 30-32).

The present system, for example as recited in claim 14, relates to a medium access device for preventing damage when, writing information in a storage layer of a multi-layer optical storage medium (e.g., such a system is illustratively shown in the present application, FIG. 1), including a light beam generator for generating a write light beam (e.g., see present application, page 1, lines 20-29); a write inhibit circuit for monitoring a plurality of distinct input signals (e.g., see present application, page 5, lines 19-26) while focusing the write light beam in a focal spot at a target storage layer (e.g., see present application, page 3, lines 16-21), and for inhibiting a writing process in case of an axial focus spot displacement (e.g., see present application, page 6, lines 9-19), an error on two or more of the plurality of distinct input signals indicates the axial focus spot displacement (e.g., see present application, page 8, lines 30-32), wherein the plurality of distinct input signals are configured for indicating an axial focus displacement (e.g., see present application, page 5, line 19 to page 6, line 8), determining a speed with which said at least two input signals change in time (e.g., see present application, page 8, line 33 to page 9, line 6), and deciding that at least two of the input signals indicate that an axial focus spot displacement is about to occur on the basis of an evaluation of such change (e.g., see present application, page 9, lines 7-10).

The present system, for example as recited in claim 18, relates to a medium access device for preventing damage when writing information in a storage layer of a multi-layer

optical storage medium (e.g., such a system is illustratively shown in the present application, FIG. 1), including a light beam generator for generating a write light beam (e.g., see present application, page 1, lines 20-29); a write inhibit circuit for monitoring a plurality of distinct input signals (e.g., see present application, page 5, lines 19-26) while focusing the write light beam in a focal spot at a target storage layer (e.g., see present application, page 3, lines 16-21), an error on two or more of the plurality of distinct input signals indicates an axial focus spot displacement (e.g., see present application, page 8, lines 30-32), wherein the write inhibit circuit is designed to monitor at least two of its input signals (e.g., see present application, page 5, lines 19-26), determine the speed with which said at least two of its input signals change in time (e.g., see present application, page 8, line 33 to page 9, line 6), and decide that the input signals indicate that an axial focus spot displacement is about to occur on the basis of an evaluation of such change (e.g., see present application, page 9, lines 7-10).

It should be explicitly noted that it is not the Appellant's intention that the currently claimed device and method be limited to operation within the illustrative device and method described above beyond what is required by the claim language. Further description of the illustrative device and method is provided above indicating portions of the claims which cover the illustrative device and method merely for compliance with requirements of this appeal without intending any further interpreted limitations be read into the claims as presented.

GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Whether claims 1-7, 11-13 and 20-21 of U.S. Patent Application Serial No. 10/599,462 are anticipated under 35 U.S.C. §102(b) over European Patent Publication No. EP 1154412 to Kono ("Kono").

Whether claims 14-19 of U.S. Patent Application Serial No. 10/599,462 are obvious under 35 U.S.C. §103(a) over Japanese Patent Publication No. JP 2004-079103 to Harada ("Harada").

ARGUMENT

CLAIMS 1-7, 11-13 AND 20-21 ARE SAID TO BE ANTICIPATED OVER KONO

Appellants respectfully request the Board to address the patentability of independent claims 1 and 2 and further claims 3, 5-7, 11-13 and 20-21 as respectively depending from independent claims 1 and 2, based on the requirements of the independent claims. This position is provided for the specific and stated purpose of simplifying the current issues on appeal. However, Appellant herein specifically reserves the right to argue and address the patentability of the dependent claims at a later date should the separately patentable subject matter of the dependent claims later become an issue. Accordingly, this limitation of the subject matter presented for appeal herein, specifically limited to discussions of the patentability of the independent claims is not intended as a waiver of Appellant's right to argue the patentability of the further claims and claim elements at that later time.

Kono is directed to detecting disturbing of focus control due to disturbance, vibration, or physical defect of the disk (see, Kono, paragraph [0022]). This is contrary to the claims, which set out "indicating an axial focus spot displacement". While at page 2 the Final Office Action expresses disagreement with the Applicant's argument, the Examiner has neglected to point exactly where in paragraph [0038] or elsewhere in Kono for that matter, support for such an assertion is found. In the referenced paragraph [0038] Kono explains the "the focus error signal is obtained only when the light beam focuses nearly on the data plane" and "if the S-shaped waveform Q1 is missed, an error is no longer detected". So, Kono detects the quantity of the light reflected from the optical disk. Accordingly, Kono does not

rely on the focus error signal and instead uses the quantity of the light reflected for determining if an error is detected. This teaches away from the claims, which set out "an error on two or more of the plurality of distinct input signals indicating an axial focus spot displacement", as for example recited in claim 1.

Moreover, page 3 of the Final Office Action references col. 9, lines 11-15 of Kono, which states the following:

> if a quick response is required, the servo failure had better be detected with focus error signal. Thus, the failure may be detected preferably with the focus error signal and the quantity of the reflected light.

Thus, assuming, arguendo, that the focus error signal and the quantity of the reflected light are relied on together and not as Kono states at col. 8, lines 53-55, interchangeably, it is the servo failure, which is a mechanical or motor failure that is being detected, not the axial focus spot displacement, as recited in the claims. It is respectfully submitted that the servo failure of Kono is different from and not synonymous with axial focus spot displacement as recited in the claims. Therefore, it is respectfully submitted that Kono does not teach, disclose, or suggests "an error on two or more of the plurality of distinct input signals indicating an axial focus spot displacement", as for example recited in claim 1.

It is respectfully submitted that the claims are not anticipated or made obvious by the teachings of Kono. For example, Kono does not teach, disclose or suggest, amongst other patentable elements, (illustrative emphasis added) "an error on two or more of the plurality of distinct input signals indicating an axial focus spot displacement; and inhibiting the writing

process in case of the axial focus spot displacement" as recited in claim 1, and as similarly recited in claim 2.

In the Advisory Office Action the Examiner repeats the previously argued position based on paragraph [0038] of Kono, which is rejected by the above argument.

Based on the foregoing, the Appellant respectfully submits that independent claims 1 and 2 are patentable over Kono and notice to this effect is earnestly solicited.

Claims 3-7, 11-13 and 20-21 depend from one of claims 1 and 2 respectively and accordingly are allowable for at least this reason as well as for the separately patentable elements contained in each of said claims. Accordingly, separate consideration of each of the dependent claims is respectfully requested.

CLAIMS 14-19 ARE SAID TO BE OBVIOUS OVER HARADA

Appellants respectfully request the Board to address the patentability of independent claims 14 and 18 and further claims 15-17 and 19 as respectively depending from independent claims 14 and 18, based on the requirements of the independent claims. This position is provided for the specific and stated purpose of simplifying the current issues on appeal. However, Appellant herein specifically reserves the right to argue and address the patentability of the dependent claims at a later date should the separately patentable subject matter of the dependent claims later become an issue. Accordingly, this limitation of the subject matter presented for appeal herein, specifically limited to discussions of the

patentability of the independent claims is not intended as a waiver of Appellant's right to argue the patentability of the further claims and claim elements at that later time.

It is undisputed that Harada fails to disclose "an error on two or more of the plurality of distinct input signals indicates the axial focus spot displacement", as for example recited in claim 14. The Final Office Action admits this at pages 2 and 7. Instead the Final Office Action states that it would have been obvious to one of ordinary skill to decide from the two or more inputted signals. Moreover, the Examiner has failed to indicate by column and line number, exactly what in Harada makes it obvious or where Harada describes "inhibiting a writing process in case of an axial focus spot displacement, an error on two or more of the plurality of distinct input signals indicates the axial focus spot displacement" as for example recited in claim 14. It is respectfully submitted that the description of referenced elements 44, 46, and 28 in Harada, FIG. 2 does not teach, disclose, or suggest the above quoted recitation of for example claim 14. In fact, in Harada, the tracking servo control part 26 or the focus servo control section 28 (see, Harada, paragraph [0019]) are utilized for detecting whether the detected acceleration is greater than a reference acceleration (see, Harada, paragraph [0020]).

Furthermore, in response to the dismissive treatment, of the axial focus spot displacement being indicated by an error on two or more of the plurality of distinct input signals, it is respectfully submitted that this limitation is not simply a redundancy as argued by the Examiner. In accordance with the claims recitation It is a matter of an independent confirmation based on at least two distinct signals to indicate an axial focus displacement.

It is respectfully submitted that claim 14 is not anticipated or made obvious by the teachings of Harada. For example, Harada does not teach, disclose or suggest, amongst other patentable elements, (illustrative emphasis added) "a write inhibit circuit for monitoring a plurality of distinct input signals while focusing the write light beam in a focal spot at a target storage layer and for inhibiting a writing process in case of an axial focus spot displacement, an error on two or more of the plurality of distinct input signals indicates the axial focus spot displacement" as recited in claim 14 and as similarly recited claim 18.

The Examiner has failed to indicate which Harada's teachings and which two or more of Harada's signals would have made the claimed elements obvious to one of ordinary skill.

It is also noted that the Examiner erroneously focuses on servo control parts 26 and 28 not on "an error on two or more of the plurality of distinct input signals indicates the axial focus spot displacement", as recited in claim 14, for example. The servo failure is different from and not synonymous with axial focus spot displacement. As with regard to the Examiner's repeating the "redundancy affirming" argument, it is respectfully submitted that reliance on this position is misplaced. The reverse of basing the determination of "an error on two or more of the plurality of distinct input signals" is not determining an error on one signal as in Harada. In accordance with the claims recitation, only one signal does not indicate an error. Accordingly, using two signals does not affirm redundancy and the Examiner's reliance on Harada is misplaced.

It is respectfully submitted that claim 14 is not anticipated or made obvious by the teachings of Harada. For example, Harada does not teach, disclose or suggest, amongst

other patentable elements, (illustrative emphasis added) "a write inhibit circuit for monitoring a plurality of distinct input signals while focusing the write light beam in a focal spot at a target storage layer and for inhibiting a writing process in case of an axial focus spot displacement, an error on two or more of the plurality of distinct input signals indicates the axial focus spot displacement" as recited in claim 14 and as similarly recited claim 18.

Based on the foregoing, the Appellant respectfully submits that independent claims 14 and 18 are patentable over Harada and notice to this effect is earnestly solicited.

Claims 15-17 and 19 depend from one of claims 14 and 18 respectively and accordingly are allowable for at least this reason as well as for the separately patentable elements contained in each of said claims. Accordingly, separate consideration of each of the dependent claims is respectfully requested.

In addition, Appellant denies any statement, position, or averment of the Examiner that is not specifically addressed by the foregoing argument and response. Any rejections and/or points of argument not addressed would appear to be moot in view of the presented remarks. However, the Appellant reserves the right to submit further arguments in support of the above stated position, should that become necessary. No arguments are waived and none of the Examiner's statements are conceded.

CONCLUSION

Claims 1-3 and 5-21 are patentable over Kono and Harada. Thus the rejection of the claims should be reversed.

Respectfully submitted,

By _____
Gregory L. Thorne, Reg. 39,398
Attorney for Appellants
July 15, 2011

THORNE & HALAJIAN, LLP
111 West Main Street
Bay Shore, NY 11706
Tel: (631) 665-5139
Fax: (631) 665-5101

APPENDIX A

CLAIMS ON APPEAL

1. (Previously presented) A method of preventing damage when writing information in a storage layer of a multi-layer optical storage medium, the method comprising acts of:

monitoring a plurality of distinct input signals while focusing a write light beam in a focal spot at a target storage layer, an error on two or more of the plurality of distinct input signals indicating an axial focus spot displacement; and

inhibiting the writing process in case of the axial focus spot displacement.

2. (Previously presented) A medium access device for preventing damage when writing information in a storage layer of a multi-layer optical storage medium, the medium access device comprising:

a light beam generator for generating a write light beam;

a write inhibit circuit for monitoring a plurality of distinct input signals while focusing the write light beam in a focal spot at a target storage layer, an error on two or more of the plurality of distinct input signals indicates an axial focus spot displacement.

3. (Previously presented) The medium access device according to claim 2, further comprising a driver circuit for driving the light beam generator in accordance with a data signal representing data to be written, the driver circuit having a control input, wherein the write inhibit circuit have an output coupled to said control input of the driver circuit, the write

inhibit circuit is designed to generate a command signal for the driver circuit to effectively inhibit the driver circuit in case of an axial focus spot displacement.

4. (Canceled)

5. (Previously presented) The access device according to claim 2, wherein the write inhibit circuit has at least three inputs for receiving at least three different input signals capable of indicating an axial focus displacement; the write inhibit circuit is designed to monitor at least two of its input signals and to inhibit the writing process only if at least two of the input signals are indicative of the occurrence of an axial focus spot displacement.

6. (Previously presented) The medium access device according to claim 2, wherein the write inhibit circuit is designed to monitor an input signal, to calculate an axial focus displacement from the input signal, and to decide that the input signal is indicative of an axial focus spot displacement only if the calculated axial focus displacement exceeds a predetermined displacement threshold.

7. (Previously presented) The medium access device according to claim 2, wherein the write inhibit circuit is designed to monitor an input signal, to monitor for the possible occurrence of a predefined characteristic feature of the input signal, and to decide that the input signal is indicative of an axial focus spot displacement only if such characteristic feature occurs.

8. (Previously presented) The medium access device according to claim 2, wherein the write inhibit circuit is designed to monitor at least one of its input signals, to determine the speed with which said at least one of its input signals changes in time, and to decide that the input signal indicates that an axial focus spot displacement is about to occur on the basis of an evaluation of such changes.

9. (Previously presented) The medium access device according to claim 8, wherein the write inhibit circuit is designed to inhibit the writing process if a time-derivative of said at least one of its input signals predicts an axial focus spot displacement.

10. (Previously presented) The medium access device according to claim 1, further comprising at least one vibration/acceleration sensor; the write inhibit circuit is designed to monitor at least an output signal from the at least one of a vibration sensor and an acceleration sensor.

11. (Previously presented) The medium access device according to claim 1, further comprising at least one optical detector for receiving light reflected from the storage medium; the write inhibit circuit is designed to monitor at least one signal derived from at least one detector output signal.

12. (Previously presented) The medium access device according to claim 11, wherein the write inhibit circuit is designed to monitor at least one of a signal corresponding to the reflected central aperture signal obtained from a forward-sense diode of the sensor, or to monitor at least a signal corresponding to the focal error signal, or to monitor at least a signal corresponding to the focal error signal integrated with a predetermined time constant.

13. (Previously presented) The medium access device according to claim 2, wherein the multi-layer optical storage medium is at least one of DVD-discs and BD discs.

14. (Previously presented) A medium access device for preventing damage when, writing information in a storage layer of a multi-layer optical storage medium, the medium access device comprising:

a light beam generator for generating a write light beam;

a write inhibit circuit

for monitoring a plurality of distinct input signals while focusing the write light beam in a focal spot at a target storage layer, and

for inhibiting a writing process in case of an axial focus spot displacement, an error on two or more of the plurality of distinct input signals indicates the axial focus spot displacement,

wherein the plurality of distinct input signals are configured for indicating an axial focus displacement, determining a speed with which said at least two input signals change

in time, and deciding that at least two of the input signals indicate that an axial focus spot displacement is about to occur on the basis of an evaluation of such change.

15. (Previously presented) The medium access device according to claim 14, wherein the write inhibit circuit is designed to inhibit the writing process if a time-derivative of said at least one input signal predicts an axial focus spot displacement.

16. (Previously presented) The medium access device according to claim 15, wherein the time-derivative is a first order time derivative.

17. (Previously presented) The medium access device according to claim 15, wherein the time-derivative is higher than a first order time derivative.

18. (Previously presented) A medium access device for preventing damage when writing information in a storage layer of a multi-layer optical storage medium; the medium access device comprising:

a light beam generator for generating a write light beam;

a write inhibit circuit for monitoring a plurality of distinct input signals while focusing the write light beam in a focal spot at a target storage layer, an error on two or more of the plurality of distinct input signals indicates an axial focus spot displacement,

wherein the write inhibit circuit is designed to monitor at least two of its input signals, determine the speed with which said at least two of its input signals change in time, and decide that the input signals indicate that an axial focus spot displacement is about to occur on the basis of an evaluation of such change.

19. (Previously presented) The medium access device according to claim 18, wherein the write inhibit circuit is designed to inhibit the writing process if a time-derivative of said at least one of its input signals predicts an axial focus spot displacement.

20. (Previously presented) The method of claim 1, wherein the plurality of signals include a signal provided by a sensor that detects mechanical vibration or acceleration acting upon the medium access device; a focus coil voltage; a normalized focal signal; an axial focal displacement signal; an axial storage layer displacement signal; an axial focal displacement loop integrator accumulated error signal; an axial focal displacement error signal integrated with a predetermined time constant; a radial tracking displacement error signal; a radial tracking loop integrator accumulated error signal; a signal indicating access of an incorrect storage layer; a signal indicating a characteristic read data feature derived from an optical detector for receiving light reflected from the storage medium or a forward-sense diode; and a forward-sense diode reflected central aperture signal; first or higher order time derivatives of said error signals; said error signals are integrated with predetermined time constants; and two or more of said error signals correlated with each other.

21. (Previously presented) The medium access device according to claim 2, wherein the plurality of signals include a signal provided by a sensor that detects mechanical vibration or acceleration acting upon the medium access device; a focus coil voltage; a normalized focal signal; an axial focal displacement signal; an axial storage layer displacement signal; an axial focal displacement loop integrator accumulated error signal; an axial focal displacement error signal integrated with a predetermined time constant; a radial tracking displacement error signal; a radial tracking loop integrator accumulated error signal; a signal indicating access of an incorrect storage layer; a signal indicating a characteristic read data feature derived from an optical detector for receiving light reflected from the storage medium or a forward-sense diode; and a forward-sense diode reflected central aperture signal; first or higher order time derivatives of said error signals; said error signals are integrated with predetermined time constants; and two or more of said error signals correlated with each other.

APPENDIX B

Evidence on Appeal

None

APPENDIX C

Related Proceedings of Appeal

None